The Effect of Unconditional Cash Transfers on Return to Work

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1. Introduction

One of the biggest questions in disability policy is to understand the reasons why so few Social Security Disability Insurance (SSDI) beneficiaries return to work, and to estimate how many workers could return to work if they received different types of support, or a different structure of benefits. SSDI provides claimants with income, meaning beneficiaries could afford to work less, or not at all. At the same time, SSDI also reduces the incentive to work, since benefits are discontinued for those who earn more than the Substantial Gainful Activity level (SGA). While both of these channels reduce or slow the return to work following disability, they do so through two very different channels: the income effect and the substitution effect.

It is important to understand whether beneficiaries' behavior is driven by the income or substitution effect for several reasons. As Autor and Duggan 2007 rightly explains, any policy reform designed to change the incentive to work will affect SSDI beneficiaries whose decisions are motivated by the substitution effect. If beneficiaries instead reduce their work due to the income effect, these policies may not have a large effect on behavior. The income and substitution effects also have different implications for social welfare. The substitution effect distorts workers' behavior, increases deadweight loss, and increases the cost of providing SSDI benefits. The income effect, on the other hand, improves disabled workers' well-being without causing this distortion.

Because SSDI benefits are provided conditional on the beneficiary remaining out of work, it is difficult to disentangle income and substitution effects. In this study, we analyze a population similar to SSDI beneficiaries, but who receive a different type of disability benefits that are *not* provided conditional on remaining work. In particular, we study injured workers who receive permanent partial disability (PPD) workers' compensation benefits. Researchers have taken a similar approach in analyzing veterans' disability compensation, which also does not change if the veteran decides to returns to work (Autor and Duggan 2011, Coile et al 2015).

While the majority of workers' compensation (WC) claimants return to work after a few weeks, approximately one-third of claimants suffer more severe injuries and become eligible for PPD benefits (NASI 2015). The extent and severity of the permanent disability varies across cases; the primary criterion for PPD eligibility is that the claimant is determined to have reached maximum medical improvement (MMI), and is not expected to fully recover from their disability. Some of these claimants may be completely impaired, while others may retain some capacity to work. Claimants are awarded PPD at the time they are determined to have reached MMI. In nearly all states (including the state for our study), once determined, they receive the award even if they later return to work. PPD benefits thus provide claimants income without changing their incentive to return to work: a prime setting to analyze income effects. We exploit a change in the assessment and calculation of PPD benefits in the state of Oregon to understand how the generosity and timing of these unconditional payments affect claimants' post-injury outcomes and decisions to return to work.

2. Policy Background and Data

In this paper, we take advantage of a large policy change to the design of PPD benefits in Oregon. Prior to 2005, PPD benefits were determined to be either *scheduled injuries*, where the injured body part could be found on a pre-existing list of guidelines in the law (similar to a listed

impairment in SSDI), or, *unscheduled injuries*, those not explicitly listed in the law. These two types of injuries had different rating procedures: for scheduled injuries, the extent of impairment was determined relative to the injured body part, while for unscheduled injuries, the extent of impairment was determined relative to the whole body. In addition to a different rating procedure, benefits for scheduled and unscheduled injuries had different benefit schedules that were updated only occasionally to adjust for inflation. To harmonize PPD awards across beneficiaries, Oregon Senate Bill 757 (SB 757) introduced a new ratings procedure and benefit calculation to be applied to all PPD cases. All injuries occurring on or after 2005 that reach MMI are assessed on the extent of impairment to the whole person, and the benefit is based on the State Average Weekly Wage (SAWW), rather than a different benefit schedule depending on the injury. In addition to assessing the extent of impairment, all post-2005 PPD awards also consider the extent of work disability at the time of claim closure. This process, similar to the socio-vocational assessment in SSDI, determines the extent to which an injury might prevent future work, by taking into account the worker's age, education and vocational factors.

As shown in Figure 1, SB 757 led to major changes in benefit values. For cases that previously would have been considered unscheduled injuries, benefits increased substantially after the reform, by approximately $6,000 on average. By contrast, injuries that previously were considered scheduled experienced significant declines, falling by an average of $3,000 after 2005.

Figure 1: Average PPD Benefit, by Injury Year

Source: Oregon Department of Consumer and Business Services and Oregon Employment Department.

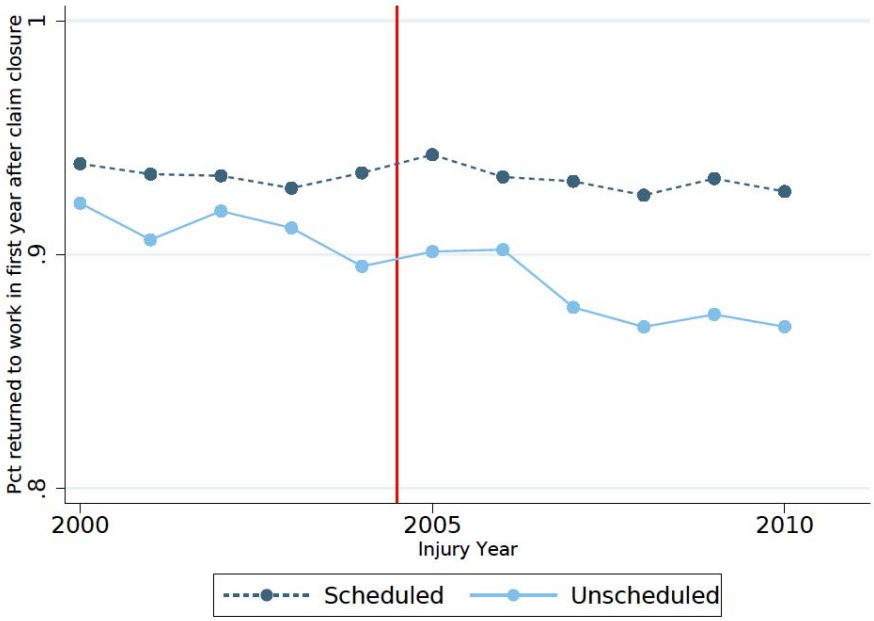
We utilize several administrative datasets from the Oregon Department of Business and Consumer Services, Workers' Compensation Division (ORWC) and the Oregon Employment Department (OED) in this study. We combine claims data recorded at the initial point of injury and information on PPD ratings at the time of claim closure. ORWC then matched this database

to the OED's administrative wage records from the state Unemployment Insurance (UI) database. Together, these data sources give us a record of injury, PPD rating, and employment information for all completed PPD claims in Oregon with dates of injury between 2000 and 2011. We make a further sample restriction that claimants in our sample did not experience a PPD claim in the ten years prior to the 2000-2011 time window.

3. Preliminary Findings

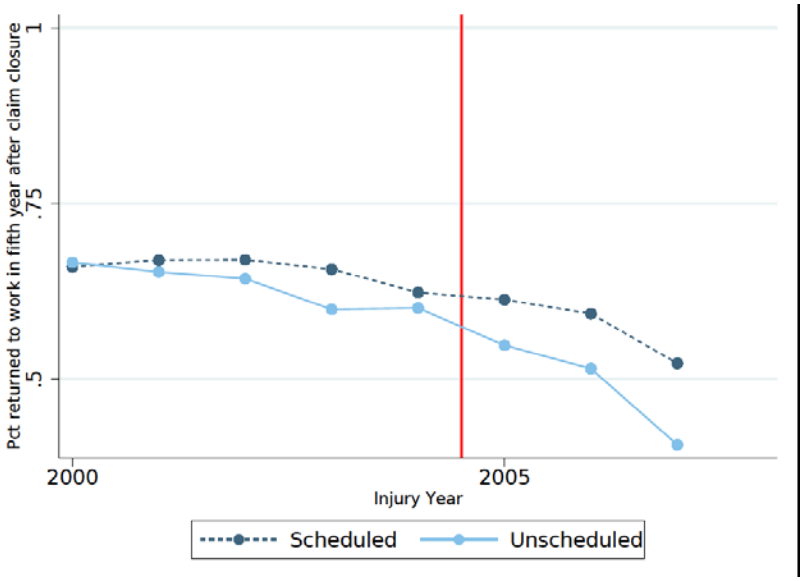
Figure 2 shows employment rates in the first year after claim closure for scheduled and unscheduled injuries. Prior to the policy change, employment rates were steady at approximately 94 and 92 percent for scheduled and unscheduled injuries, respectively. There is little noticeable change in employment rates for scheduled injuries between the two regimes. However, employment rates decline from by 2-3 percentage points for unscheduled injuries, who typically receive more generous benefits after the reform. Figure 3 shows employment rates five years after the injury. While employment rates decline for both groups after 2005, employment rate trends for unscheduled injuries experience a steeper decline in employment, falling from approximately 60 percent in 2004 to 45 percent by 2007.

Figure 2: Employment Rates in First Year after Claim Closure, by Injury Type and Year



Source: Oregon Department of Consumer and Business Services and Oregon Employment Department.

Figure 3: Employment Rates in Fifth Year after Claim Closure, by Injury Type and Year



Source: Oregon Department of Consumer and Business Services and Oregon Employment Department.

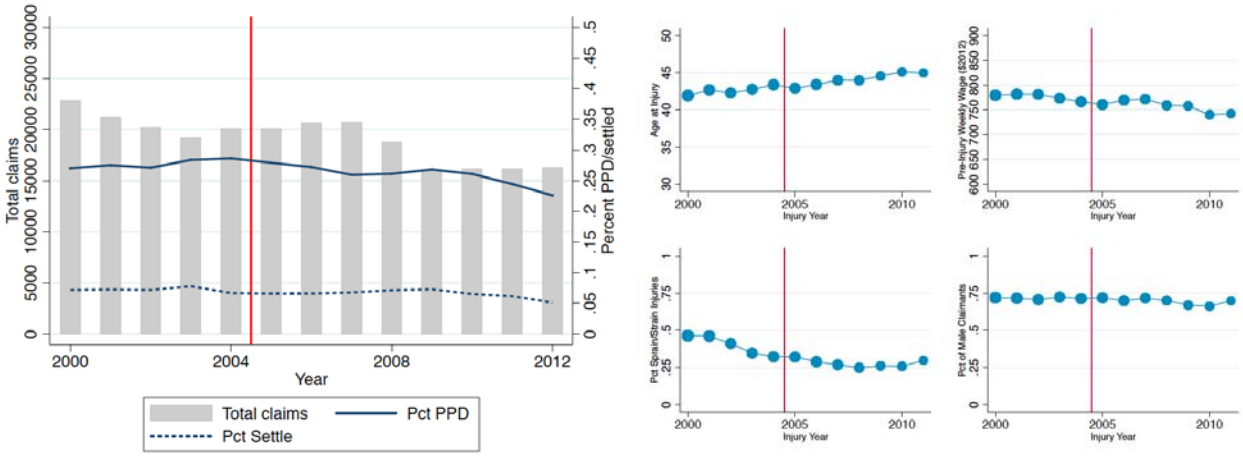
These figures demonstrate that workers with unscheduled injuries reduce their labor supply after a change to more generous PPD benefits, providing some evidence of an income effect. However, the great recession could also be contributing to the decline in employment rates after 2005. Furthermore, all injuries after 2005 experienced the effects of the policy change, ruling out a standard difference-in-difference design comparing a treatment and control group. However, as shown in Figure 1, claimants experience *differential* changes in the size of their benefit after 2005. As a result, we will identify the effect of the policy change by comparing workers in a given year who experience different changes in benefits relative to the pre-period.

To estimate this dose-response relationship, we will construct a hypothetical benefit for each claimant in the pre-2005 regime, and use this hypothetical benefit as a control function. Several features of the data allow us to accurately calculate the hypothetical pre-2005 benefit for all claimants. We observe the injured body part throughout all years of the data, allowing us to map whether an injury to a particular body part after 2005 would have been considered a scheduled or unscheduled injury if it had occurred before 2005. Secondly, we observe the percent of impairment to the whole person across both regimes for body parts in the unscheduled injuries, and the percent of impairment to the whole person or a specific body part for scheduled injuries, depending on the policy regime. Using a scaling factor provided in the data, we can adjust impairment percentages for pre-2005 scheduled body parts to reflect the implied impairment percentage for the whole person. We apply these claim inputs to the published benefit schedule and benefit formula in 2004 to obtain a constant measure of hypothetical (or actual) benefits in the pre-reform regime for all claims.

The main identifying assumptions in implementing this approach are that there are no breaks in the trend of worker characteristics, claim frequency, and impairment assessments across the policy change. Figure 4 shows that claim frequency, worker characteristics, and initial injury characteristics all trend smoothly through 2005. Furthermore, the applicable formula for

calculating PPD benefits is determined by the date of injury, meaning there is little opportunity for workers to shift their eligibility date for PPD.

Figure 4: Claim Frequency and Worker Characteristics, by Injury Year



Source: Oregon Department of Consumer and Business Services and Oregon Employment Department.

Our next steps will be to quantify the labor supply elasticities in a regression framework using this dose-response relationship, and including fixed effects for injury year to account for changes in overall labor market conditions. We will study outcomes including return to work, earnings, earnings above SGA, the duration of non-employment after claim closure, and changes in occupation, job responsibilities, or employer after injury. We will examine these outcomes over several time frames, including the first quarter, year, and five years after injury.

References

Autor, D. and M. Duggan. 2007. "Distinguishing Income from Substitution Effects in Disability Insurance." *American Economic Review: Papers and Proceedings.*

Autor, D. and M. Duggan. 2011. "Battle Scars: Declining Employment and Rising Disability Receipt among Vietnam-Era Veterans" *American Economic Review: Papers and Proceedings*.

Coile, C., M. Duggan and A. Guo. 2015. "The Decline in Labor Force Participation among America's Veterans: Could the VA's Disability Compensation Program be the Cause?" *American Economic Review: Papers and Proceedings.*

National Academy of Social Insurance. 2015. "Workers Compensation: Benefits, Coverage and Costs, 2013." Washington, DC. Available online at http://www.nasi.org/sites/default/files/research/NASI_Work_Comp_Year_2015.pdf.